

IN THE CLAIMS

Claim 1 (amended): A process for the preparation of a polymeric network, comprising:

~~(i) providing one or more polymers which can be crosslinked intramolecularly or intermolecularly or intra- and intermolecularly by covalent or non-covalent bonding,~~

(ii) (i) adapting at least one of the polymers polymer to at least one template compound to obtain at least one conformation of the at least one polymer,

(ii) fixing the at least one conformation intramolecularly or intermolecularly or intra- and intermolecularly by covalent or non-covalent crosslinking

~~wherein at least one of the preferred conformations obtained according to (ii) is fixed by crosslinkage.~~

Claim 2 (currently amended): A process according to Claim 1, wherein step ~~(ii)~~ (i) is carried out in the presence of at least one of the template compounds.

Claim 3 (previously presented): A process according to Claim 1 wherein the adaptation of the conformation of the at least one polymer takes place in at least two steps.

Claim 4 (amended): A process according to Claim 3, wherein after each step of the at least two steps the ~~preferred~~ conformation obtained from ~~this~~ the step is fixed by ~~crosslinkage~~ crosslinking.

Claim 5 (currently amended): A process according to Claim 3, wherein at least one of the at least two step is carried out in the absence of the at least one template compound.

Claim 6 (previously presented): A process according to Claim 1, wherein the polymeric network is prepared on at least one support material.

Claim 7 (previously presented): A process according to Claim 6, wherein the at least one polymer is applied to the at least one support material in layers in at least two successive steps.

Claim 8 (amended): A process according to Claim 7, wherein the application in layers leads to a primarily crosslinked polymer network which has a conformation which is adapted to the at least one template compound in at least one further step in the presence of the at least one template compound and is fixed by ~~crosslinkage~~ crosslinking.

Claim 9 (amended): A polymeric network, ~~preparable~~ prepared by the process of Claim 1.

Claims 10-14 (canceled)

Claim 15 (new): The process of claim 1 further comprising:

(iv) subsequently contacting substances to the at least one conformation to separate the substances.

Claim 16 (new): The process of claim 1 further comprising:

(iv) subsequently contacting a substance to the at least one conformation to convert the substance.

Claim 17 (new): The process of claim 1 further comprising:

(iv) subsequently contacting a receptor to the at least one conformation to prepare a substance.

Claim 18 (new): The process of claim 1 further comprising:

(iv) subsequently contacting a substance to the at least one conformation to recognize the substance.

Claim 19 (new): The process of claim 1 further comprising:

(iv) subsequently contacting a substance to the at least one conformation to detect signals.

Claim 20 (new): A process for the preparation of a polymeric network, comprising:

(i) providing one or more polymers having at least one group comprising an OH group, amine group, a SH group, a OSO_3H group, a SO_3H group, OPO_3H_2 group, a OPO_3HR group, a PO_3H_2 group, a PO_3HR group, or a COOH group, where R in each case is selected such that an activating reagent or a derivative of said activating reagent can be reacted with said one or more polymers having at least one functional group in homogeneous and/or heterogeneous phase;

(ii) adapting at least one of the polymers from step (i) to at least one template compound to obtain at least one conformation of the at least one polymer;

(iii) fixing the at least one conformation obtained in step (ii) intramolecularly or intermolecularly or intra- and intermolecularly by covalent or non-covalent crosslinking.

Claim 21 (new): The process of claim 20 wherein the polymeric network is prepared on at least one support material.

Claim 22 (new): The process of claim 21 wherein the at least one polymer is applied to the at least one support material in layers in at least two successive steps.

Claim 23 (new): The process of claim 22 wherein the application in layers leads to a primarily crosslinked polymer network which has a conformation which is adapted to the at least one template compound in at least one further step in the presence of the at least one template compound and is fixed by crosslinking.

Claim 24 (new): A polymeric network prepared by the process of claim 20.